# **Original Research Article**

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# Knowledge of obstetric danger signs among pregnant women attending antenatal clinic at rural health training centre of a medical college in Hyderabad

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#### **ABSTRACT**

**Background:** One of the major causes for the death of women is due to maternal mortality. Around 529,000 women die annually from maternal causes (World Health Organization (WHO) estimate) Majority of these deaths occur in the less developed countries. An Indian woman dies from complication related to pregnancy and child birth for every 7 minutes. For every woman who dies =30 more women suffer injuries, infection and disability. In Sub-Saharan Africa, where one of every 16 women dies of pregnancy related causes during her lifetime, compared with only 1 in 2,800 women in developed regions. Raising awareness of women about obstetric danger signs would improve early detection of problems and helps in seeking timely obstetric care.

**Methods:** A cross sectional study was conducted among pregnant women who attended antenatal clinics between May 2014–August 2014 at field practice areas of RHTC, KAMSRC. A total 274 pregnant women had given consent and participated in the study. Data was collected by interview in local language and a predesigned and pretested questionnaire was used which include socio demographic profile, parity, ANC visits, gravid, knowledge regarding danger signs during pregnancy, post-partum period. Socio-economic status was assessed according to Modified Kuppuswamy's classification (as per June 2015 CPI).

**Results:** About 35.7%, pregnant women have good awareness 21.2%, average and 43% have poor knowledge about danger signs of pregnancy. Pregnant women in the age group of >30 years, educational status and occupational status of pregnant women and their husbands and pregnant mothers who had regular antenatal check-ups had significant associations with the awareness of obstetric danger.

**Conclusions:** Our study concludes that there is need of creating awareness and increasing the knowledge of women about obstetric danger signs.

Keywords: Obstetric danger signs, Labour, Antenatal and post natal period

#### **INTRODUCTION**

A pregnant women is a dyad– A unit of two individuals consisting of mother and the foetus-, which starts after conception continues through all the phases of pregnancy and post pregnancy. <sup>1</sup>

The birth of a baby is a major reason for celebration around the world. Societies expect women to bear children and honor women for their role as mothers. Yet in most of the world, pregnancy and childbirth is a perilous journey.<sup>2</sup> The major cause for the death of women is due maternal mortality. Around 529,000 women die annually from maternal causes (World Health

Organization (WHO) estimate). Majority of these deaths occur in the less developed countries. An Indian woman dies from complication related to pregnancy and child birth every 7 minutes. For every woman who dies =30 more women suffer injuries, infection and disability.<sup>2,3</sup> The situation is most dire for women in Sub-Saharan Africa, where one of every 16 women dies of pregnancy related causes during her lifetime, compared with only 1 in 2,800 women in developed regions.<sup>4</sup> Most maternal deaths are in resource poor countries. "Delay to make a decision to seek care, delay to reach place of care and delay in receiving appropriate and adequate care" are the main attributed to the three delays.<sup>5</sup> Women should be made aware of danger signs of obstetric complications during pregnancy, delivery and the postpartum.<sup>6</sup> There is unavailability of facilities with skilled attendants and functional emergency obstetric care services in most of the rural areas. Ultimately, improving the knowledge will empower them and their families to make prompt decisions. In order to achieve millennium development goal-5, several interventions were undertaken under National Rural Health Mission to ensure access to skilled care at birth, emergency obstetric care for complications, financial assistance for availing antenatal and intranatal care including referral transport. Most importantly, the demand by women and the community for utilization of resources is equally important. For the enhancing the utilization of skilled care during low-risk births and emergency obstetric care in complicated cases in low income countries, knowledge of obstetric danger signs and birth preparedness are the major strategies.8,9 Maternal deaths due to obstetric complications can be reduced with the presence of skilled attendants at births and availability of emergency obstetric care. 10-12 and this depends on a functional referral system from rural communities to health facilities. 13 There is a risk of sudden, unpredictable complications that could end in death of pregnant woman or injury to herself or to her infant. Pregnancy related complications cannot be reliably predicted. 14

Danger signs of obstetric are the symptoms which can be easily identified even by non-clinical personnel.

Raising awareness of women about obstetric danger signs would improve early detection of problems and helps in seeking timely obstetric care. <sup>15</sup>

#### Aim of the study

To assess the knowledge of obstetric danger signs among pregnant women in rural areas.

#### **METHODS**

#### Study design

A cross sectional study was conducted among pregnant women who attended antenatal clinics between May 2014–August 2014 in the field practice areas of rural

health training center, KAMSRC. A total 274 pregnant women who had given consent for the study have been included in the study. Data was collected by interview in local language and a predesigned and pretested questionnaire was used which included socio demographic profile, parity, ANC visits, gravid, knowledge regarding danger signs during pregnancy, labour and postpartum period.

Socio-economic status was assessed according to Modified Kuppuswamy's classification (as per June 2015 CPI).

*Inclusion criteria:* Antenatal mothers who are attending ANC OPD and are who have given consent for the study.

*Exclusion criteria:* Non Pregnant women attending OPD and who have not given consent for the study.

Knowledge assessment of pregnant mother's was done and categorized as:  $^{16}$ 

- Good awareness: could mention >75% of obstetric danger signs
- Fair awareness: could mention 50% 75% of obstetric danger signs
- *Poor awareness:* could mention <50% of obstetric danger signs.

Study area: Field practice area of RHTC, KAMSRC.

Study population: Pregnant women attending ANC clinic.

*Ethical clearance:* Taken from the institutional ethical committee.

#### Consent

Study subjects have been explained about the purpose of the study in local language and oral consent have been taken.

### **RESULTS**

A total of 274 pregnant women have given consent and participated in the present study. Majority of them were in the age group of 30 years and above of age group (41.2%), followed by the age group of 21-30 years (31.3%) and <20 years are 27%. 56% of them were Hindus, followed by Muslims (24.8) and Christian (19%). Nuclear families were found to be 39.8% and 60.2% were joint families. Majority of pregnant women (43.4) completed upto intermediate and their husbands (35.4) have completed middle school level. Majority of the study population (43.4%) is working as unskilled workers, 30% housewives, 26% were unskilled workers, and their husband are skilled workers (45.6%), semiskilled (34%) and unskilled (19.3%) (Table 1).

Table 1: Factors associated with knowledge of obstetric danger signs among the study population.

Variable	Knowledge				
	Good (98) (%)	Fair (58) (%)	Poor (118) (%)	Total (%)	P value
Age (in years)					
<20	37 (49.3)	13 (17.3)	252 25 (33.3)	75 (100)	<0.05
21-30	18 (20.9)	23 (26.7)	45 (52.3)	86 (100)	
>30	43 (38.1)	22 (19.5)	48 (42.5)	113 (100)	
<b>Educational status of pr</b>	egnant women				
Illiterate	1 (5.3)	3 (15.8)	15 (78.9)	19 (100)	<0.05
Primary schooling	7 (11.3)	6 (9.7)	49 (79)	62 (100)	
Middle schooling	44 (59.5)	14 (18.9)	16 (21.6)	74 (100)	
Intermediate	46 (38.7)	35 (29.4)	38 (31.9)	119 (100)	
<b>Educational status of the</b>	e husband		•	•	
Illiterate	8 (17.8)	11 (24.4)	26 (57.8)	45 (100)	<0.05
Primary schooling	20 (22)	25 (27.5)	46 (50.5)	91 (100)	
Middle schooling	49 (50.5)	15 (15.5)	33 (34)	97 (100)	
Intermediate	21 (51.2)	7 (17.1)	13 (31.7)	41 (100)	
Occupation of the pregn	ant women				
Housewife	18 (21.7)	18 (21.7)	47 (56.6)	83 (100)	
Unskilled	39 (54.2)	10 (13.9)	23 (31.9)	72 (100)	< 0.05
Semiskilled	41 (34.5)	30 (25.2)	48 (40.3)	119 (100)	
Occupation of the husba	ınd				
Unskilled	14 (26.4)	9 (17)	30 (56.6)	53 (100)	<0.05
Semiskilled	29 (30.2)	24 (25)	43 (44.8)	96 (100)	
Skilled	55 (44)	25 (20)	45 (36)	125 (100)	
Antenatal check visits to	health care facility				
Regular	62 (30.8)	43 (21.4)	96 (47.8)	201 (100)	<0.05
Irregular	36 (49.3)	15 (20.5)	22 (30.2)	73 (100)	

Table 2: Knowledge about obstetric danger sign among pregnant women (n=274).

Danger signs during pregnancy	No	%	
Bleeding PV	177	64.5	
Anemia	158	57.6	
Convulsions	134	48.9	
Edema hands/feet/face	131	47.8	
High fever	128	46.7	
Premature delivery	125	45.6	
Head ache	121	44.2	
Hypertension	129	47.0	
Danger signs during labour	·		
Severe bleeding	196	71.5	
Retained placenta	188	68.6	
Edema hands/feet/face	177	64.5	
Convulsions	158	57.6	
Labour lasting for long time	148	54.1	
Head ache	109	39.7	
Danger signs in postnatal period			
Severe bleeding PV	203	74.0	
Foul smelling discharge	199	72.6	
High fever	188	68.6	
Head ache	153	55.8	

36.5% of study population belongs to lower socioeconomic class followed by 25.5% upper lower

class, 23.0 belongs to lower middle and 15.0 belongs to upper middle class.

About 35.7%, pregnant women have good awareness 21.2%, average and 43% have poor knowledge about danger signs of pregnancy. Pregnant women in the age group of >30 years, educational status and occupational status of pregnant women and their husbands and pregnant mothers who had regular antenatal checkups had significant associations with the awareness of obstetric danger signs of pregnancy, during labour and post natal period (p<0.0005).

Type of family, socioeconomic status and religion doesn't have association with obstetric danger sign in the present study.

Danger signs during pregnancy: In the present study, 64.6% of the study population is aware about bleeding PV during pregnancy, followed by anemia (57.6%), convulsions (48.9%). Edema hands/feet/face (47.8%) and danger signs during labour: severe bleeding (71.5%), retained placenta (68.6%), edema hands/feet/face (64.5%) and convulsions (57.6%) labour lasting for more time (54.2%).

Danger signs in postnatal period: severe bleeding per vagina (74.0%), foul smelling discharge per vaginum (72.6%), and high fever (68.6%) (Table 2).

In the present study the major source of health information was by medical officer followed by ANM and anganwadi workers.

#### **DISCUSSION**

A total of 274 pregnant women have participated in the present study. Majority of them were in the age group of 30 years and above of age group (41.2). Majority of pregnant women (43.4) completed up to intermediate and their husbands (35.4) have completed middle school level. Majority of the study population (43.4%) is working as unskilled workers, 30% housewives, 26% were unskilled workers, and their husband are skilled workers (45.6%), semiskilled (34%) and unskilled (19.3%) (Table 1).

A study conducted by Vijay et al found that the 47% of the study subjects were aged group 0f 20- <25 years, 39% are aged 25-<30 years, 11% were aged 30-<35 years and only 3% were aged >35 years. <sup>16</sup> Educational status of study subjects in the study, 12% completed primary education, 64% of subjects completed secondary education. Majority of subjects were housewives (82%).

In the present study about (98) 35.7%, pregnant women have good awareness (58) 21.2%, average and (118) 43% have poor knowledge about danger signs of pregnancy. A study shows that 20% of the subjects have fair knowledge, 73% has poor knowledge about danger signs. Similar study conducted by Krishna et al found that the respondent's knowledge of danger signs was quite low and this is indeed worrisome.

In the present study, pregnant women in the age group of >30 years, educational status and occupational status of pregnant women and their husbands and pregnant mothers who had regular antenatal checkups had significant associations with the awareness of obstetric danger signs of pregnancy, during labour and post natal period (p<0.0005).

In a study showed that women  $\geq 31$  years had better knowledge when compared to the women of the other two categories. The socio-demographic, individual, and health service-related factors did not have any significant association with participants' knowledge on all key danger signs, but have significant association with knowledge of at least one key danger sign.

Vijay et al found in their study that educational status had significant association with level of knowledge on danger signs during pregnancy. Similarly study shows that there is a significant association between knowledge scores about danger signs with mother age, education and it was found that religion has no significant association.

In the present study, 64.5% of the study population is aware about bleeding per vaginum during pregnancy, following anemia (57.6%), convulsions (48.9%), edema of hands/feet/face (47.8%).

In a study among the 200 antenatal women, 39% were aware of vaginal bleeding and convulsions, 33.5% reported fever. 17 28%, 27.5% were aware of severe head ache and leg swellings respectively, whereas only 20% and 18% of the women could tell about reduced fetal movements and water leak without pain respectively. In our study danger signs during labour severe bleeding (71.5%), retained placenta (68.6%), edema hands/feet/face (64.5%) and convulsions (57.6%).

Similar results were also found in the study conducted by Vijay et al. <sup>16</sup> A study conducted by Acharya et al also found that only 27.8% women knew any one danger sign during pregnancy. <sup>19</sup> Mukhopadhya et al study also observed that proportion of women knowing at least one danger sign ranged from 12.1% to 37.2%. <sup>20</sup>

Severe abdominal pain (n=232; 60.7%) was the most common danger signal of pregnancy followed by heavy bleeding (n=216; 56.5%) were the findings in the study conducted by Nithya et al.<sup>21</sup>

In our study, findings for the danger signs in postnatal period were severe bleeding per vagina (74.0%), foul smelling discharge (72.6%), and high fever (68.6%).

Heavy bleeding was also the most common danger sign of labor (n=96, 56.1%) and post-delivery (n=125, 32.7%) reported by the study participants. High fever followed this in the postnatal period (n=112, 29.3%).<sup>21</sup>

#### **CONCLUSION**

In the present study less than 50% pregnant women have good awareness 21.2%, average and 43% have poor knowledge about danger signs of pregnancy. Hence there is an urgent need for creating awareness and increasing the knowledge of women about obstetric danger signs among the population.

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